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Aphasia in a Chinese-English Bilingual Speaker with Dementia

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Few studies report progressive aphasia in Chinese speakers (see Ren et al., 2012 for a review) and only one has described the language decline of Chinese speakers with DAT in detail (Weekes, 2000). This is the first report of the linguistic features of progressive aphasia in a Chinese speaker who has dementia of the Alzheimer's type DAT.

Case Report

Mr C is a native Cantonese speaker who learned English as a second language from an early age and subsequently Mandarin as a third language in adulthood. He presented for language and speech assessment at the age of 55 following gradual loss of spoken and written language abilities. At the time of testing, Mr C was unable to produce more than single word utterances. He was alert and cooperative with testing although complained of comprehension difficulties. Brain amyloid load was measured by PIB-PET and regional cerebral glucose metabolism (rCMRGlc) was measured by FDG-PET. There was a decreased glusose metabolism over bilateral frontal, parietal and temporal lobes with sparing of motor cortices. Markedly decreased metabolism in precuneus and posterior cingulate gyrus was present (see Figure). Mr C was assessed for confrontation naming over a two year period in Cantonese and English. The results revealed a significant decline in language production in both languages although confrontation naming in Cantonese (L1) was better preserved than English (L2). There was an effect of grammatical class on performance with more impairment to spoken word production of verbs (actions) and nouns (objects) in L2 but not L1.

Conclusions

Studies of aphasia in more than one language show that language status has an effect on performance with L1 better preserved than L2 until the final stages of the disease suggesting that age of acquisition is a critical variable (Druks & Weekes, 2010) although in some cases language dominance may be a more important factor than language status (Filley et al., 2006). Bilingual speakers with dementia show a grammatical category-specific deficit on confronation naming with worse performance on naming of actions compared to objects. Although an effect of grammatical category has been reported in billingual Chinese speakers after a cerebrovascular accident (Dai et al. 2012), this is the first report of this pattern in a Chinese bilingual speaker with DAT. Chinese speakers with DAT including bilingual speakers may present with aphasia in the first stages of the illness.

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